

Work Order ID 158668

158668

Page 1

Wednesday, March 29, 2017 8:37:34 AM

Item ID: D4882-1 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Strut
 Start Date: 3/30/2017 Start Qty: 4.00 ***4*** Cust Item ID:
 Required Date: 4/6/2017 Req'd Qty: 4.00 ***4*** Customer:
 Reference: SCHEDULED

Approvals: Process Plan: DAS 21 Date: MAR 29 2017 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: 9-89 Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D4882	C

100 DOOSAN LATHE 0.30

100

Doosan Memo 3.50

Doosan Lathe 1- Turn as per Folio FB247
 Rev: N/A & Dwg D4878 Rev: C

2- Deburr

110 QC2- Inspect parts off machine FAI/FAIB 0.00

110

QC Memo 0.04

Quality Control

4 _____ 17-03-31

4 _____ 17-03-31

PTO

DQA:

Date:

2017-05-25



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date:

APR 18 2017

Work Order update only

Work Order: <u>158668</u>		DISPOSITION		AGAINST DEPARTMENT/PROCESS			
Part No. <u>D4882-1</u>		Rework ☐		Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐
NCR No. <u>17-6386</u>		Scrap ☒		Machining ☒	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐
		Use-as-is ☐		Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
		Suspected Unapproved ☐		Large Fab ☐	Composite ☐	Supplier ☐	
Date: <u>17-04-03</u>		Step #: <u>100</u>		QTY Effective: <u>2</u>		MRB (QSI042) Approval DAS <u>9</u> 9-89 <u>17.04.03</u>	
Description Work Order Deviation				Disposition			
dimension .672 ^{+0.001} / _{-0.000} is @ .674" on qty 1 and @ .6735" on qty 1				Scrap destroy "critical part" No replace.			
				Completed By <u>J 17-04-03</u>			
				Lead hand / Supervisor Approval Verification DAS <u>14</u> 9-89 <u>17.04.03</u>			
				QC / QA Coordinator Approval DAS <u>9</u> 9-89 <u>17.04.03</u>			
Root Cause				FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐	Offset/Set-up ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	☒ Over/Under tolerance		
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐		
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	☒ Manufacturing Process						
Misidentified ☐	Past Due ☐	OTHER: <u>172</u> <u>1188</u> <u>158</u>					

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
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Past Expiry Date ☐	Manufacturing Process ☐	OTHER : ☐							
Misidentified ☐	Past Due ☐								

Work Order ID 158668

Wednesday, March 29, 2017 8:37:34 AM

158668

Page 3

Item ID: D4882-1

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Strut

Start Date: 3/30/2017 Start Qty: 4.00

4

Cust Item ID:

Required Date: 4/6/2017 Req'd Qty: 4.00

4

Customer:

Reference: SCHEDULED

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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150

QC5- Inspect part completeness to step on W/O

0.00

150

QC

Memo

0.08

Quality Control

2

DAS
38
9-89

APR 10 2017

160

Identify as per dwg & Stock Location: 51/33 0.00***160***

Packaging

Memo

0.04

Packaging

2

DAS
6
9-89

APR 11 2017

170

QC21- Final Inspection - Work Order Release 0.00

170

QC

Memo

0.40

Quality Control

17/4/13

DAS
21
9-89

APR 13 2017

DAS
21
9-89

107 11 88

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

Picklist Print

Page 1

Wednesday, March 29, 2017 8:37:37 AM

Work Order ID: 158668

158668

Parent Item: D4882-1

D4882-1

Parent Item Name: Strut

Start Date: 3/30/2017

Required Date: 4/6/2017

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP REV:A 13.12.17 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M174PH-H900R0.750		Purchased	No			100	f	1.8750	0.409	1.722105			

M174PH-H900R0 750

17-4 SS H900 ROUND BAR 0.750"

Location

Loc Qty

Loc Code

MAT030

1.875

m136481

1.875

1.875 *p* 17-03-31

22 1/2"

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																															
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DQA: _____ Date: _____

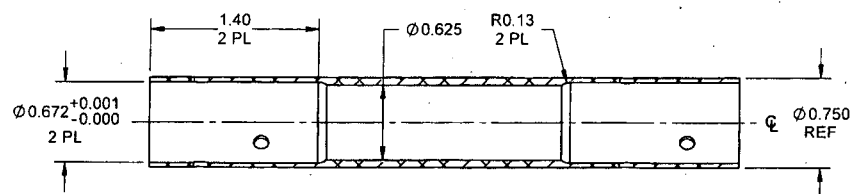


WORK ORDER NON-CONFORMANCE / UPDATE

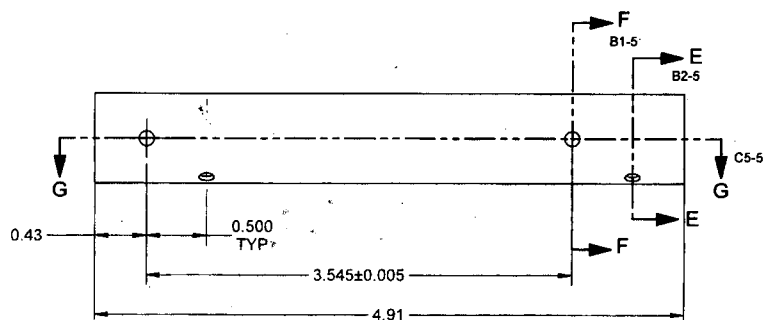
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
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OTHER : _____									



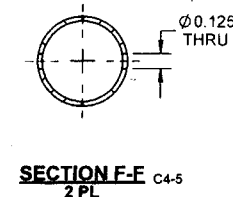
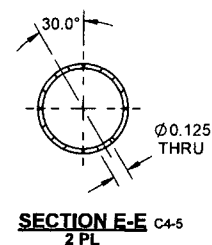
SECTION G-G B4-5



D4882-1 STRUT

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

NO. *158668-115*
1703-24



NOTES:

- 1) MATERIAL: 17-4 PH/S17400/TYPE 630 SS ROUND BAR, H900 CONDITION
PER AMS 5643/ASTM A564
DART SPEC M17-4-R
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.6
- 7) WEIGHT: 0.15 lbs
- 8) LIQUID PENETRANT INSPECT PER QSI 038 6.1.1 (ASTM E1417 LEVEL 2)

RELEASED
2014-07-07
WD

APPROVED

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	VS	HAWKESBURY, ONTARIO, CANADA	
CHECKED	HS	DRAWING NO.	REV. C
MFG. APPR.	JFS	D4882	SHEET 5 OF 5
APPROVED	HS	TITLE	SCALE
DE APPR.	D3	LEG ASSEMBLY	NTS
DATE	14.06.24	COPYRIGHT © 2013 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PO REPRINT

Purchase Order ID PO35835

Purchase Order Date 4/4/2017
PO Print Date 4/10/2017

Page Number 2 of 4

Order From :
SKYSERVICE
6120 MIDFIELD ROAD
MISSISSAUGA, ONTARIO L5P 1B1
CANADA

VC-SKY001

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name
Vendor Phone 905-678-5636

Ship To Contact
Ship To Phone

Ship Via Delivered
Ship Acct

Buyer Chantal Lavoie
Customer POID
Customer Tax # 10127-2607
Terms Net 30
Currency CAD
FOB FCA - (Free Carrier)

3 158668

D4882-1 STRUT

4/7/2017
Yes
4/7/2017

2.00

Line Total: \$0.00

\$0.00 \$0.00

LIQUID PENETRANT INSPECTION AS PER QSI 038 OR
LPI AS PER ASTM 1417 LEVEL 2

~~38~~
2-89

Line Total: \$0.00

4 158490

D212-664-107
CROSSTUBE

4/7/2017
Yes
4/7/2017

1.00

\$0.00 \$0.00

LIQUID PENETRANT INSPECTION AS PER QSI 038 OR
LPI AS PER ASTM 1417 LEVEL 2

Line Total: \$0.00

8817-4-10

Note:

4/6/2017

**skyservice****Work Order Traveler**

Sky Service F.B.O. Inc.

DOT APP 53-89 / EASA 145.7142 / BDA AMO 389

WO #: MWO31677	Customer: Dart Aerospace Ltd.	Dept: NDT YUL	Reference: PO35835
Descr:	PN:	S/N:	Qty: 1
Make:	Model:	Reg:	A/C S/N:
TSN:	CSN:	TSO:	
Task: UNSCHEDULED			Sequence: 1

Work Required:

CARRY OUT NDT ON 18 PARTS AS PER PO35835

10 END FITTINGS , ITEM ID# D4883-3 , WORK ORDER ID# 158184

2 STRUTS , ITEM ID# D4882-1 , WORK ORDER ID# 158668

2 FWD CROSSTUBES , ITEM ID# D119-796-141 , WORK ORDER ID# 158479, 157378

2 AFT CROSSTUBES , ITEM ID# D119-796-241 , WORK ORDER ID# 158476, 158477

1 FWD CROSSTUBE , ITEM ID# D212-664-107 , WORK ORDER ID# 158490

1 SKID TUBE , RD17-742-01

Action Taken:						Date:	Initial/Stamp:
LPI C/O IAW ASTM E-1417M-13 ***NO CRACK FOUND*** PEN. ZL-56, MPO13600, CLEANER SKC-S MPO13923 , EMU. MPO15896, DEV. MPO11715 , UV LIGHT M-20142						APR 07 2017	
Description	Location	P/N	Qty	Batch	S/N Off	S/N On	
		DAS 38 9-89					

I certified that the maintenance described above has been performed in accordance with the applicable standard of airworthiness.

Signature:	ACA/SCA Stamp 	Date: APR 07 2017
Name: RAFIK MELIKIAN		